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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/759,649	01/12/2001	Lawrence Suen	ELETP001	2265
22879	7590	12/22/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			WU, RUTAO	
		ART UNIT	PAPER NUMBER	
		3639		

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/759,649	SUEN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Rutao Wu	3639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 10 May 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
  - 4a) Of the above claim(s) 3-6 and 11-15 is/are withdrawn from consideration.
- 5) Claim(s) 8,9,21 and 22 is/are allowed.
- 6) Claim(s) 1-2, 7, 10, 16-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Status of Claims***

1. Applicant has amended claims 1, 7-10, 16, 19-22 and canceled claims 3-6, 11-15 in amendment filed on May 10, 2005.

### ***Response to Amendment***

2. In response to applicant's arguments filed on May 10, 2005 the examiner disagrees regarding the following claims.

Claims 1-2, 7, 10, 16-20 are still directed to non-statutory subject matter. The claims are merely directed to a hypothetical mental exercise that manipulates an abstract idea of manipulating data/information to determine a number without requiring the use of the determined number and hence are without a claimed concrete and tangible practical application of the abstract idea. (note In re Beauregard 35 USPQ2d 1383 (CAFC 1995) and the associated claims of U.S. Patent 5,710,578; and State Street Bank & Trust Co. v. Signature Financial Group Inc. 47 USPQ2d 1596 (CAFC 1998)).

In practical terms, claims define nonstatutory processes if they:

- A) consist solely of mathematical operations without some claimed practical application (i.e. , executing a "mathematical algorithm"); or
- B) simply manipulate abstract ideas, e.g. , a bid (Schrader, 22 F.3d at 293-94, 30 USPQ2d at 1458-59) or a bubble hierarchy (Warmerdam, 33

F.3d at 1360, 31 USPQ2d at 1759), without some claimed practical application of the mathematics or abstract idea.

In view of the above analysis claims 1-2, 7, 10, 16-20, as a whole, are directed to an hypothetical mental exercise that merely manipulates mathematics or an abstract idea without a claimed concrete and tangible practical application of the mathematics or abstract idea, and hence are directed to non-statutory subject matter.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-2, 7, 10, 16-20 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per Claims 1-2, 7, 10, 16-20, these claims recite a series of steps and are considered for the purpose of analysis un 35 U.S.C. 101 as reciting a series of steps. The claims do not recite an pre- or post-computer activity but merely perform a series of steps of determining a color value number for the color for each pixel and then perform mathematical functions, and is directed to non-statutory subject matter. A process is statutory if it requires physical acts to be performed outside of the computer independent of and following the steps performed by a programmed computer, where those acts involve the manipulation of tangible physical objects and result in the object

having a different physical attribute or structure (*Diamond v. Diehr*, 450 U.S. at 187, 209 USPQ at 8). Further, the claims merely manipulate an abstract idea or perform a purely mathematical algorithm without limitation to any practical application. A process which merely manipulates an abstract idea or performs a purely mathematical algorithm is non-statutory despite the fact that it might have some inherent usefulness (*Sakar*, 558 F.2d at 1335, 200 USPQ at 139).

Furthermore, in determining whether the claimed subject matter is statutory under 35 U.S.C. 101, a practical application test should be conducted to determine whether a "useful, concrete and tangible result" is accomplished. See *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1359-60, 50 USPQ2d 1447, 1452-53 (Fed. Cir. 1999); *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1600 (Fed. Cir. 1998).

An invention, which is eligible for patenting under 35 U.S.C. 101, is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The fundamental test for patent eligibility is thus to determine whether the claimed invention produces a "use, concrete and tangible result". The test for practical application as applied by the examiner involves the determination of the following factors"

(a) "Useful" – The Supreme Court in *Diamond v. Diehr* requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished.

Applying utility case law the examiner will note that:

- i. the utility need not be expressly recited in the claims, rather it may be inferred.
- ii. if the utility is not asserted in the written description, then it must be well established.

(b) "Tangible" – Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. 101. In *Warmerdam* the abstract idea of a data structure became capable of producing a useful result when it was fixed in a tangible medium, which enabled its functionality to be realized.

(c) "Concrete" – Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.

The claims, as currently recited, are non-statutory since there is no practical application of the result. Thus, the result appears to be useful and concrete, however, is not tangible. The result of the claim as a whole or the manipulations of data as

recited in the claims is not applied in any manner so as to be tangibly used in a concrete manner and hence produce a useful, concrete and tangible result.

***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

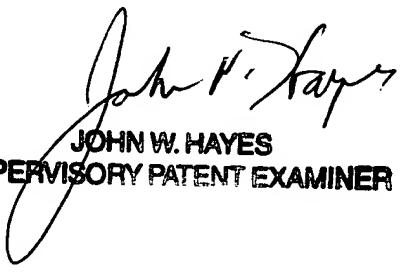
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruta Wu whose telephone number is (571)272-3136. The examiner can normally be reached on Mon-Fri 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571)272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RW

  
JOHN W. HAYES  
SUPERVISORY PATENT EXAMINER